

**What is claimed is:**

1. A slide nut mountable on a threaded shaft or rod, the slide nut comprising:

a nut body having an axis and an outer surface, the nut body defining an axial bore adapted for receiving the threaded shaft or rod and a stepped transverse bore extending radially inward from a first point on the outer surface, through the axial bore, and terminating at a second point on the outer surface, the transverse bore including first and second end segments and an intermediate segment disposed therebetween, a stop being disposed intermediate the first end segment and the intermediate segment;

a plug mounted in the second end segment of the nut body transverse bore;

a thumb piece having an actuator segment disposed in the intermediate segment of the nut body transverse bore and an operator segment extending from the actuator segment through the first end segment of the nut body transverse bore to an outer end, a stop being disposed intermediate the actuator segment and the operator segment, the actuator segment defining a transverse aperture extending from a first end proximate to the operator segment to a second end longitudinally spaced from the first end, the second end having a threaded surface; and

a biasing mechanism disposed within the intermediate segment of the nut body transverse bore between the plug and the actuator segment of the thumb piece, the biasing mechanism biasing the thumb piece away from the plug;

wherein, when a threaded shaft or rod is disposed in the axial bore of the nut body the biasing mechanism urges the threaded second end of the transverse aperture into threaded engagement with the threaded shaft or rod and when a threaded shaft or rod is not disposed in the axial bore of the nut body the stop of the thumb piece engages the stop of the nut body transverse bore to limit radial movement of the thumb piece.

2. The slide nut of claim 1 wherein the first and second points are oppositely disposed on the outer surface of the nut body and the transverse bore extends through the axis of the nut body.

3. The slide nut of claim 2 wherein the transverse bore has an axis which intersects the axis of the nut body.

4. The slide nut of claim 1 wherein the first end segment has an inside diameter  $D_2$  and intermediate segment has an inside diameter  $D_3$  which is greater than  $D_2$  forming an inner shoulder within the transverse bore defining the stop of the nut body transverse bore.

5. The slide nut of claim 4 wherein the actuator segment of the thumb piece has an outside diameter  $D_6$  and the operator segment of the thumb piece has an outside diameter  $D_5$  which is less than  $D_6$  forming a circumferential outer shoulder on the thumb piece defining the stop of the thumb piece.

6. The slide nut of claim 1 wherein the first end segment of the transverse bore has an inner surface having a flattened section extending

transversely to the axial bore and the operator segment of the thumb piece has a flattened portion extending transversely to the transverse aperture, the flattened section of the first end segment and the flattened portion of the operator segment indexing the thumb piece to the nut body whereby the transverse aperture is disposed in general registry with the nut body axial bore.

7. The slide nut of claim 6 wherein the operator segment of the thumb piece has an overall outer diameter  $D_5$  and an outer diameter  $D_7$  at the flattened portion and the first end segment of the transverse bore has an overall inside diameter  $D_2$  and an inside diameter  $D_8$  at the flattened section, where  $D_2 > D_5 > D_8 > D_7$ .

8. The slide nut of claim 1 wherein the plug includes oppositely disposed inner and outer surfaces, the outer surface of the plug and the outer surface of the nut body each having alternating, axially extending ridges and grooves forming a knurled outer surface.

9. The slide nut of claim 8 wherein the plug also includes at least one protrusion and the outer surface of the nut body also has at least one notch for receiving the protrusion, the notch and protrusion indexing the ridges and grooves of the plug to the ridges and grooves of the nut body.

10. The slide nut of claim 1 wherein the axial bore of the nut body has a diameter and the transverse aperture of the thumb piece has a width which is substantially equal to the diameter of the axial bore.

11. The slide nut of claim 10 wherein the second end of the transverse aperture has an arcuate shape.

12. A slide nut mountable on a threaded shaft or rod, the slide nut comprising:

- a nut body having an axis and an outer surface, the nut body defining a first bore extending axially therethrough for receiving the threaded shaft or rod and a second bore extending transversely therethrough and intersecting the first bore, the second bore including first and second end segments and an intermediate segment disposed therebetween, the intermediate and first end segments forming a stop;

- a plug mounted in the second end segment of the second bore;

- a thumb piece disposed in the second bore having actuator and operator segments defining a stop, the operator segment being disposed in the intermediate segment and the operator segment extending from the operator segment through the first end segment to an outer end, the actuator segment defining an aperture in general registry with the first bore of the nut body, the aperture extending from a first end proximate to the operator segment to a threaded second end longitudinally spaced from the first end; and

- a spring disposed within the intermediate segment of the nut body second bore between the plug and the actuator segment of the thumb piece, the spring biasing the thumb piece away from the plug;

- wherein, when a threaded shaft or rod is disposed in the first bore of the nut body the spring urges the threaded second end of the aperture into threaded engagement with the threaded shaft or rod and when a threaded shaft or rod is not disposed in the first bore of the nut body the

stop of the thumb piece engages the stop of the nut body second bore to limit radial movement of the thumb piece.

13. The slide nut of claim 12 wherein the first bore is coaxial with the nut body axis and the second bore has an axis which intersects the nut body axis.

14. The slide nut of claim 12 wherein the first end segment has an inside diameter  $D_2$  and intermediate segment has an inside diameter  $D_3$  which is greater than  $D_2$  forming an inner shoulder within the second bore defining the stop of the nut body second bore and the actuator segment of the thumb piece has an outside diameter  $D_6$  and the operator segment of the thumb piece has an outside diameter  $D_5$  which is less than  $D_6$  forming a circumferential outer shoulder on the thumb piece defining the stop of the thumb piece.

15. The slide nut of claim 12 wherein the first end segment of the second bore has an inner surface having a flattened section extending transversely to the first bore and the operator segment of the thumb piece has a flattened portion extending transversely to the aperture, the operator segment of the thumb piece has an overall outer diameter  $D_5$  and an outer diameter  $D_7$  at the flattened portion and the first end segment of the second bore has an overall inside diameter  $D_2$  and an inside diameter  $D_8$  at the flattened section, where  $D_2 > D_5 > D_8 > D_7$ .

16. A slide nut mountable on a threaded shaft or rod, the slide nut comprising:

a nut body having an axis and an outer surface, the nut body defining a first bore extending axially therethrough for receiving the threaded shaft or rod and a second bore extending radially inward from the outer surface, through the first bore, and terminating at an end surface disposed intermediate the first bore and the outer surface, the second bore including first and second end segments and an intermediate segment disposed therebetween, the intermediate and first end segments forming a stop;

a thumb piece disposed in the second bore having actuator and operator segments defining a stop, the operator segment being disposed in the intermediate segment and the operator segment extending from the operator segment through the first end segment to an outer end, the actuator segment defining an aperture in general registry with the first bore of the nut body, the aperture extending from a first end proximate to the operator segment to a threaded second end longitudinally spaced from the first end; and

a spring disposed within the intermediate segment of the nut body second bore between the end of the second bore and the actuator segment of the thumb piece, the spring biasing the thumb piece away from the end of the second bore;

wherein, when a threaded shaft or rod is disposed in the first bore of the nut body the spring urges the threaded second end of the aperture into threaded engagement with the threaded shaft or rod and when a threaded shaft or rod is not disposed in the first bore of the nut body the stop of the thumb piece engages the stop of the nut body second bore to limit radial movement of the thumb piece.